OTHEC
370.7309713
OS9DE/R

PROVINCIAL NORMAL SCHOOLS,

TORONTO AND OTTAWA.

REGULATIONS

AND

PROGRAMME OF STUDIES.

TORONTO:
PRINTED BY WARWICK & SONS, 26 AND 28 FRONT STREET WEST, TORONTO.
1887.

NS
1887

PROVINCIAL

NORMAL SCHOOLS,

TORONTO AND OTTAWA.

REGULATIONS

AND

PROGRAMME OF STUDIES.

TORONTO:
PRINTED BY WARWICK & SONS, 26 AND 28 FRONT STREET WEST, TORONTO.
1887.

Digitized by the Internet Archive
in 2025 with funding from
University of Toronto

https://archive.org/details/provincialnormal00onta_0

PROVINCIAL NORMAL SCHOOLS, TORONTO AND OTTAWA.

PROGRAMME OF STUDIES.

1.—EDUCATION.

1.—HISTORY OF EDUCATION.

(20 *Lectures.*)

Origin of Education.

Greek Education.—Plato and Aristotle.

Roman Education.—Quintilian on the education of an orator.

Humanistic Education.—The Greek and Latin Fathers; The Schoolmen; John Sturm.

The Renaissance.—Erasmus; Vittorino da Feltre.

The Realists.—Ratke and Comenius.

The Naturalists.—Rabelais and Montaigne.

English Humanists and Realists.—Roger Ascham and John Milton.

The Jesuits and Jansenists.—John Locke; Rousseau; Pestalozzi; Kant, Fichte and Herbart; Jacotot; Frœbel; Bell and Lancaster; Wilderspin; Thomas Arnold; Herbert Spencer; Bain.

Text-Book.—Browning's Educational Theories.

For Reference.—Quick's Educational Reformers.

2.—SCIENCE OF EDUCATION.

(20 *Lectures.*)

Fourfold Division:—Physical, Intellectual, Moral, Æsthetic.

The difference between man and other animals; mind and body.

The nature of *Mental Science*; its bearing on Education; the mind; difference between mind and matter; mental faculties classified, and their action illustrated; the Rational Intuitions.

The Senses.—Sensation and perception; the outer and the inner sense; consciousness; training the senses; their utilization in the work of Education; special value and training of particular senses.

Representative Faculty.—Distinct and lasting images, how produced; association of ideas; imagination; general and special memory; cultivation of memory and imagination; educational use and value.

Elaborate Faculty.—Its processes; concepts, how formed; comparison; abstraction; generalization; general terms; training of this faculty, and value for purposes of Education; judgment and reasoning; qualities of judgment; induction; analogy and experience; deduction; demonstrative and probable reasoning; systemization.

Sensibility,—The emotions; those indispensable in education; training and utilization of, in work of Education; instinct; appetites, affections, desires.

The Will.—What is implied by; rational will; attention; concentration of mind; effect of, on intellectual attainment.

Text-Book.—Hopkins' Outlines of the Study of Man.

For Reference.—Jardine's Psychology of Cognition, Sully's Psychology, Bain's Education as a Science, Spencer's Education.

3.—PRINCIPLES AND PRACTICE OF TEACHING.

(20 *Lectures.*)

The two fold object of teacher; instruction and training; preparatory training; learning and remembering; limitation of lessons; notes of lessons; linking on new knowledge to old; general principles of method; illustrations; use of blackboard; text-books; oral teaching; examining; question and answer; formation of taste; method with reference to particular subjects of Public School work.

Text-Book.—Fitch's Lectures on Teaching.

For Reference.—Johonnot's Principles and Practice of Teaching.

4.—SCHOOL ORGANIZATION AND SCHOOL MANAGEMENT.

(20 *Lectures.*)

(1) SYSTEMS OF ORGANIZATION.

(*a*) *The Individual System.*—Its characteristics; its advantages and defects.

(*b*) *The Mutual or Monitorial System.*—The origin and progress of the system; its characteristic feature; the schemes of Bell and Lancaster compared; its advantages, defects and shortcomings.

(*c*) *Collective Systems.*—The training or Stow system; the leading features of the plan; the simultaneous or class-room system; its principal characteristics, advantages and defects.

(*d*) *Mixed Systems.*—The tripartite system; leading features and mode of working the scheme; its advantages and defects.

(*e*) *The Pupil-teacher or English System.*—Its origin and mode of working.

(2.)—The School Room.

(*a*) The physical conditions of successful teaching.

(*b*) The size and proportion of school buildings.

(*c*) Shape, size, and disposition of rooms.

(*d*) *Mode of Lighting.*—Kinds and position of windows; importance of proper lighting.

(*e*) *Heating and Ventilation.*—Temperature best for work in school; warming by stoves; by hot air; by hot-water pipes; by steam pipes; the advantages and defects of each method; quantity of fresh air necessary to be provided for each child; different methods of ventilation; advantages and defects of each method.

(*f*) *Fittings and Furniture.*—General rules for arranging furniture different kinds of desks, etc.

(3)— Classification and Arrangement of Time.

(*a*) *Classification.*—The object of classification; manifold, twofold, and single systems of classification; practical considerations respecting classification, such as attainments, number of pupils, number of teachers, etc.

(*b*) *Distribution of Time.*—General considerations; method of proceeding to draw up a time table; specimen time-tables adapted to different kinds of schools.

(4.) School Government.

(*a*) *Discipline.*—What it includes; the authority of the teacher and how it is to be exercised; what is required to administer discipline well; right and wrong use of mechanical drill; commands and mistakes in connection with them.

(*b*) *Rewards.*—Their place as motives; how to use and economize them.

(*c*) *Punishments.*—Principles to be kept in view; characteristics of effective punishments; kinds of punishment in common use; the sense of shame; tasks as punishment; the best kinds of punishment.

Text-Book.—Fitch's Lectures; Baldwin's Art of School Management.

For Reference.—Landon's School Management.

II.—ENGLISH LANGUAGE AND LITERATURE.

1.—English Literature.

(20 *Lectures.*)

Critical reading of a play of Shakespeare or the work of some other standard author.

2.—Practical English.

(20 *Lectures.*)

Pronunciation.—What is meant by correct pronunciation; what constitutes the standard of pronunciation; the principles that underlie this art; the rules that are serviceable; words in general use liable to be mispronounced; the different sounds of letters and the methods of representing them.

Text-Book.—Ayres Orthoëpist.

Words.—Their uses and their construction.

Language.—Style ; errors in the use of words ; errors in construction.

Text-Book.—Ayres' Verbalist.

For Reference.—Hodgson's Errors in English ; White's Every Day English ; White's Words and their Uses.

III.—HYGIENE.

(20 *Lectures.*)

Introduction.—Definition and objects. Results of attention and inattention to proper sanitary conditions.

Air.—The blood ; its circulation ; changes it undergoes ; the action of oxygen on it. The means by which oxygen is brought into contact with the blood. The lungs, their structure, mechanism, and chemistry of respiration. Impurities of air ; their sources and their effects. Amount of carbon dioxide in air normally ; amount which may be allowed, which results from respiration, fires, lights and sickness. Amount of fresh air required, cubic space and hourly supply. Position and size of outlet and inlet openings. Natural ventilation in winter, in summer,—warming, artificial ventilation. Examination of the air, by senses, by simple chemical test ; thermometer, hygrometer, barometer.

Climatology.—Hygienic influences of soils, slopes, marshes, bodies of water. Prevailing winds. Sunlight. Location of school houses.

Infection and Contagion.—Theories and facts regarding their propagation. Description of infectious diseases ; period of incubation ; simple rules and precautions regarding them.

Disinfection and Disinfectants.—The more common disinfectants, and how to use them.

Clothing.—Purposes to be subserved by clothing ; properties of common materials ; effects of compression by clothing.

Bathing.—Structure and physiology of skin. Proper conditions for bathing, as to temperature, digestion, exercise, precaution ; resuscitation of the apparently drowned.

Foods.—Proximate principles, classes, purposes secured by each class.

Organs of Digestion.—Description, structure and physiological action of them, deductions.

Alcohol.—Not needed as food. Its effects on the tissues.

Water.—Its action and purposes in the human system, sources, contamination, examination, color, taste, smell ; simple chemical tests.

Eye.—Its structure, defects of vision explained, how remedied, how to preserve the sight.

The Ear.—Its structure. Care of the ear.

School Furniture.—Adaption of seats and desks to the pupils. Deformities caused by neglect.

Physical Exercise.—Physiology of muscle. Rational and irrational athletics. Gymnastics, calisthenics, recreations for summer, winter, for boys, girls. The play-ground.

Mental Exercise.—Age. Amount and variety of work, of home-work. Change and recreation between tasks. Rest and sleep.

How to treat injuries from accidents.—Fainting, suffocation, strangulation, choking, bleeding from nose, wounds, blows on the head, blows on the abdomen.

IV.—CHEMISTRY.

(30 *Lectures.*)

Definition of Chemistry and chemical action. Elements and compounds. Indestructibility of matter. Law of definite proportions. Chemical compounds and mechanical mixtures. Constitution of matter. Avogadro's Law and deductions from it. The principles of chemical nomenclature. Formulæ and equations.

Oxygen.—Its preparation and properties. Oxides, acids, alkalies, bases and hydrates. Allotropic oxygen or ozone.

Hydrogen.—Its preparation and properties.

Nitrogen.—Its preparation and properties.

Carbon.—Its preparation and properties.

Chemical calculations. Calculations of quantities by volume and by weight. Reduction of gaseous volumes to standard pressure and temperature.

Carbon Dioxide.—Its preparation and properties. Its decomposition in plants by sunlight. Its production by combustion, respiration, and fermentation.

Carbon Monoxide.—Its preparation and properties.

Nitric Acid.—Its composition, preparation, properties, uses and tests.

Compounds of Nitrogen and Oxygen.—Nitrogen monoxide, nitrogen dioxide. Dalton's Atomic Theory.

Ammonia.—Its preparation by the use of nascent of hydrogen and nitrogen. Difference between elements in the free and in the nascent state. Its liberation by the decomposition of organic nitrogeneous substances. Its preparation by the action of slaked lime on sal-ammoniac. Its properties. Its importance in agriculture. The significance of its occurrence in certain well-waters.

Water.—Its formation, properties and composition. Determination of composition by analysis and by synthesis. Hard and soft water. Causes of permanent and temporary hardness. Modes of softening water for domestic purposes. The significance of the presence of organic matter in water and simple tests for its presence.

The Atmosphere.—Its composition by weight and by volume. Constancy of composition. Diffusion of gases. The presence and uses in it of ozone, aqueous vapor, carbon dioxide and ammonia.

Light and heavy Carburetted Hydrogen and Coal Gas.—Their preparation and properties.

Combustion.—Combustibles and supporters of combustion. The composition of ordinary fuel or combustion in a grate or stove. Nature of flame. Luminosity of a flame. The flame of a candle, the Bunsen Burner, the blowpipe, the Davy lamp.

Chlorine.—Its preparation and properties. The theory of bleaching by chlorine. Hydrochloric acid.

Sulphur.—Its occurrence in nature and allotropic modifications. Sulphur dioxide, sulphurous acid and sulphites. Sulphuric acid and sulphates.

Phosphorus.—Its preparation, properties, allotropic modifications, and uses.

TEXT-BOOKS.—Reynolds', Miller's, or Roscoe's Chemistry.

NOTE.—The experiments are made in the simplest manner possible. The object aimed at is (1) to make the experiment understood, (2) to have them explained by the student, (3) to habituate the student to render an account to himself of natural phenomena, and (4) to enable the future teacher to repeat them with very little cost. In order to accomplish the latter purpose, opportunities are afforded for practical work in the Laboratory, under the supervision of the Science Master.

V.—AGRICULTURE.

(20 *Lectures.*)

VI.—PHYSICS.

(30 *Lectures.*)

HEAT, LIGHT, AND ELECTRICITY.

1.—HEAT.

General effects of heat upon solids, liquids and gases. Expansion of solids, liquids and gases compared. Coefficient of expansions, linear, superficial and cubical.

Application of Expansion.—Thermometers; Harrison's Gridiron Pendulum; Graham's Mercurial Pendulum.

Water.—Coefficient of expansion compared with the coefficient of alcohol and mercury dependence of boiling point on external pressure; maximum density and anomalous expansion and contraction.

Gases.—Coefficient of expansion; Boyle's Law and Law of Charles; fire balloons; ventilation; sun's action in generating winds; trade winds.

Aqueous Vapor.—Constitutional, chemical and physical; meaning of term, saturated; clouds and rain.

Specific Heat.—Definition; different methods of finding specific heat; specific heat of water, alcohol, mercury; the influence of the high specific heat of water upon climate.

Latent Heat.—Latent heat of water; change which occurs when a block of ice below the freezing point is converted into steam; the change of temperature due to the mixture of steam and water in various proportions; freezing mixtures.

Conduction.—In solids, liquids, and gases ; the low power of conduction of organic substances ; effects of mechanical texture on the transmission of heat.

Convection.—Distribution of heat through liquids and air generally.

Radiation.—The different powers possessed by substances to radiate heat ; the reciprocity of radiation and absorption.

Mechanical Theory of Heat.—The mechanical equivalent of heat ; application of mechanical theory to combustion ; to the phenomena of specific heat, etc.

The Conservation of Energy.

2.—LIGHT.

Sensation of light, how caused ; rays of light proceed in straight lines ; applications.

Mode of determining the velocity of light by eclipses of Jupiter's satellites.

The causes of shadow and penumbra.

Reflection.—Laws of reflection ; reflection from plane mirrors ; inversion of images ; distance of image behind a looking-glass is equal to distance of object in front of glass ; the multiplication of images by angular mirrors ; kaleidoscope.

Refraction.—Laws of refraction ; illustration and application of refraction.

Lenses.—The effects of lenses ; the principal focus of a lens ; the magic lantern.

The Eye.—The optical structure of the eye ; the conditions of distinct vision ; the causes and remedies of long and short sight ; the principles of binocular vision ; the stereoscope.

The composite character of white light ; the doctrine of colors as introduced by absorption.

3.— ELECTRICITY.

(1.)—*Frictional Electricity.*

The mode of exciting bodies by friction ; the action of rubbed and unrubbed vitreous bodies on each other ; the action of rubbed and unrubbed resinous bodies upon each other ; the action of vitreous bodies upon resinous bodies, and the reverse ; from these facts deduction of law that similarly electrified repel, and that dissimilarly electrified attract each other.

Provisional conception called theory of electric fluids ; positive and negative electricity ; mode of determining the quality of the electricity with which any body is charged.

Electric induction and application of theory of electric fluids to explanation of these phenomena.

The electrophorus and its mode of action.

The Leyden Jar.

The distribution of electricity on the surface of conductors ; the theory of lightning conductors.

(2.)—*Voltaic Electricity.*

Simplest method of generating a voltaic current.

Daniel's, Grove's and Bichromate of Potash batteries.

The magnetical effects of the circuit ; the action of the current upon iron filings ; its action on a freely suspended magnetic needle ; its action upon a bar of iron placed within a coil round which the current circulates.

Ruhmkorff's coil ; the magneto-electric machine.

Some of the chemical effects of the current.

The principle of the telegraph, the telephone, electric bells and the fire alarm.

Text-Book.—Gage's Physics.

For Reference.—Tyndall's Heat a Mode of Motion ; Mayor and Barnard's Light ; Tyndall's Electricity.

Note.—As in Chemistry, great importance is attached to the applications of Physics to the explanation of the physical phenomena of daily life. The experiments are elementary and easy to repeat.

VII.—BOTANY.

(20 *Lectures.*)

1.—*Chemical Preliminaries.*

The composition of air, water, carbon dioxide, and ammonia.

The composition of starch, cellulose, sugars, albuminoids.

The most important ingredients in the ash of plants.

2.—*Histological Preliminaries.*

The chemical and physical properties of protoplasm.

The structure of the vegetable cell.

The mode of growth of tissues.

The distinctive characters of parenchyma, prosenchyma, and vascular tissue.

3.—*General Structure of Flowering Plants.*

The use and structure of roots.

The general structure and special modifications of stems.

The structure and position of buds ; vernation.

The different parts of the leaf : stipules, petiole, blade ; their special modifications.

The minute structure of leaves ; fibro-vascular framework, intercellular spaces, epidermis, stomato.

Inflorescence, difference between definite and indefinite ; the distinctive character of the following kinds : raceme, spike, spadix, corymb, panicle, umbel, head, cyme.

The envelopiug and essential organs of the flower ; æstivation.

The modification of the flower due to cohesion, adhesion, and suppression of the various parts.

Morphological comparison of the leaf, floral envelopes, stamens and carpels.

Fruit and its different forms ; the distinctive character of the following kinds ; achene, nut, drupe, berry, pod, capsule.

The general process of plant nutrition.

The movement of fluids in the plant.

4.—*General Classification of Plants.*

5.—*The Characters, including general properties of the following natural orders:*

Ranunculaceæ, or Crowfoot Family.

Cruciferæ, or Cress Family.

Malavceæ, or Mallow Family.

Leguminosæ, or Pulse Family.

Rosaceæ, or Rose Family.

Sapindaceæ, or Soapberry Family.

Umbelliferæ, or Parsley Family.

Compositæ, or Sunflower Family.

Labiatæ, or Mint Family.

Trilliaceæ, or Trillium Family.

Lilliaceæ, or Lily Family.

Iridaceæ, or Iris Family.

Text-Books.—Macoun and Spotton's Botany, or Gray's How Plants Grow.

Note.—The Syllabus does not indicate the order in which the subjects are discussed. This order depends on the facility with which specimens may be obtained. The course is made as practical as possible.

VIII.—ZOOLOGY.

(20 *Lectures.*)

Introductory.—Definition of Zoology. Distinction between animals and plants. Protoplasm and life. Cells and tissues. Organs and their functions. Adaptation of Organs. Classification.

I.—INVERTEBRATA.

The general characters and classification of the invertebrate animals.

1. *Protozoa.*—The Amœba, its structure and life history.

2. *Porifera or Sponges.*—General character of sponges.

3. *Cœlenterata.*—General characters of cœlentrates. Hydra ; Medusæ ; Polyps (corals), and coral islands.

4. *Echinodermata.*—General characters of echinoderms. Star-fish, sea-urchins.

5. *Vermes or Worms.*—General characters. Tape-worm ; trichina spiralis, earth worms and leeches.

6. *Mollusca.*—General characters. Clam ; snail ; oyster.

7. *Arthropoda (Crustaceans and Insects.)*—General characters of arthropods.

Crustacea.—General characters of crustaceans ; the lobster.

Insecta.—General character of insects. Nervous system ; breathing apparatus ; seeing apparatus, sense of touch ; uses ; metamorphosis.

Sub-Class I. *Myriopeda.*—General characters.

Sub-Class II. *Arachnida.*—General characters. Spiders and scorpions.

Sub-Class III. *Hexopoda.*—General characters.

Order 1. *Neuroptera.*—General characters. May flies ; dragon flies.

Order 2. *Orthoptera.*—General characters. Grasshoppers ; crickets ; locusts.

Order 3. *Hemiptera.*—General characters. Squash-bug ; cochineal insects.

Order 4. *Coleoptera.*—General characters. Beetles.

Order 5. *Diptera.*—General characters. The common house-fly.

Order 6. *Lepidoptera.*—General characters. Butterflies and moths.

Order 7. *Hymenoptera.*—General characters. Bees.

II.—VERTEBRATA.

General character of vertebrates ; classification of vertebrates.

1.—*Pisces (Sharks, Rays, Sturgeons, Garpikes, and bony fishes).*

General characters of fishes.

2.—*Batrachia (Salamanders, Toads, and Frogs).*

General characters of batrachians.

3.—*Reptilia (Lizards, Snakes, Turtles, and Crocodiles).*

General characters of reptiles.

4.—*Aves (Birds).*

General characters of birds. Ducks and geese ; cranes ; hens, partridge, turkey ; pigeon ; owls ; eagles ; woodpeckers ; crows ; sparrows ; swallows ; robins.

5.—*Mammalia (Mammals).*

General character of mammals. Opossums and kangaroos ; sloths and ant eaters ; rats, squirrels, beavers ; moles ; bats ; whales ; elephants ; ox, camel, pig, deer, horse ; tapir ; sheep, cow ; bear, cat, tiger, lion ; man.

IX.—DRAWING.

(40 *Lessons.*)

(*a*) Direction—straight and curved ; division of lines.

(*b*) Position—horizontal ; vertical ; oblique ; parallel ; perpendicular ; inclined.

(*c*) Combination of lines to form angles, triangles, quadrilaterals, and multilaterals.

(*d*) Curved line figures—circle, oval and eclipse.

(*e*) Reverse curves, circular, elliptical, or ovoid in character.

2.—*Designing.*

(*a*) Construction of simple ornamental forms or units of design; symmetry, etc.

(*b*) Various ways of modifying a unit of design.

(*c*) Various ways of repeating a unit of design in ornamentation.

(*d*) Conventionalization of plant forms, viz., flowers and leaves.

(*e*) Application of conventional forms in ornamentation.

(*f*) Various ways of producing variety of designs.

(*g*) Designing (1) simple ornamental forms, or rosettes within a square or circle as an enclosing figure ; (2) borders either vertical or horizontal ; (3) patterns for covering surfaces, as floors, etc.

3.—*Object or Model Drawing, and Freehand Perspective.*

(*a*) Judging distances by arm's length measurements, or by the eye alone.

(*b*) Indicating by means of construction lines and guide dots, the proportions of the vase models.

(*c*) Outlining the vase forms from the round models, without shade or perspective effect.

(*d*) The effect of distance and change in position, on the apparent size and form of a circle.

(*e*) Freehand perspective outline of the vase models, and similar objects in any position.

(*f*) The effect of distance and change in position, on the apparent size and form of planes and rectangular objects.

(*g*) Freehand perspective outline of rectangular objects, without shade or shadow.

(*h*) The outlines of plant forms, as leaves and flowers.

4.—*Working Drawings, or Constructive Drawings.*

(*a*) Terms used : Vertical and horizontal planes ; intersection line ; placing line (the indefinite vertical), plan, elevation, section, shade lines, half tint.

(*b*) Plans, elevations and sections of common objects, as cubes, prisms, cylinders, benches, tables, chairs, bolts, screws, mouldings, etc.

(*c*) Lettering and giving the various readings of working drawings.

5.—*Scientific Perspective.*

(*a*) Horizontal—Perspective of lines ; planes ; rectangular and rotund objects touching the picture plane or within it.

(*b*) Angular—Perspective of lines ; planes ; rectangular and rotund objects touching the picture plane or foreground.

(*c*) Solutions of problems in horizontal and angular perspective.

6.—*Practical Geometry.*

(*a*) Lines—Bisection ; perpendiculars ; parallels ; divisions of a line into equal parts.

(*b*) Angles—Construction of angles of given magnitude, bisection of angles, and trisection of right angles.

(*c*) Triangles—Construction of triangles with side of given length.

(*d*) Polygons—Construction of square and oblong.

(*e*) Circles—Circle completed from given arc ; centre found ; centre inscribed within, or described about a circle or a square.

7.—*Miscellaneous.*

(*a*) Methods of teaching each subject discussed.

(*b*) Exercises in Dictation, Memory and Time Drawing ; Reduction and Enlargement of Drawings.

(*c*) Teachers-in-training to have practice in methods of teaching Drawing.

Text-Books.—Authorized Drawing Books.

X.—MUSIC.

(40 *Lessons.*)

PRELIMINARY TRAINING.

Breathing exercises.

Singing the scale with vowels.

Singing the scale with syllables.

Rote singing.

SINGING BY NOTE.

Exercises in time and tune.

Exercises and songs in keys of C. G. D. A. E.

Exercises and songs in keys F. B. flat, E. flat, A. flat.

(Breathing exercises continued.)

Text-Book.—Public School Music Reader.

SONGS IN TWO AND THREE PARTS.

Advanced exercises in same keys (one part).

Easy two-part exercises and songs.

Easy three-part exercises and songs.

Advanced two and three-part exercises and songs.

Text-Book.—High School Music Reader.

SONG IN THREE AND FOUR PARTS.

Part songs for mixed voices, in three and four parts.

(Lessons in teaching, with practice throughout the term.)

XI.—CALISTHENICS.

(20 *Lessons, with Exercises.*)

Positions of walking, standing, and running, (1) for boys, (2) for girls.

Exercises for the chest, neck, fingers and feet.

Exercises with rods, dumb bells and clubs.

Exercises in jumping, bending the body and limbs.

Length of pace for young ladies ; for gentlemen.

Positions of the arms and hands in walking with or without articles, such as hand-bags, parcels, etc.

XII.—MILITARY DRILL.

(20 *Lessons, with Exercises.*)

Position of attention, and standing at ease.

Squad drill. Extension motions.

Turning—Length of paces for men.

Number of paces per minute in slow, quick and double time.

Increasing and decreasing the front of a body of men.

Moving by fours. Length of pace required.

Side pace, length, etc.

For Reference.—Houghton's Physical Culture.

XIII.—METHOD.

Review and Method of Teaching the following subjects :

1.—LANGUAGE LESSONS, GRAMMAR, ANALYSIS, COMPOSITION, SPELLING.

(20 *Lectures.*)

Language Lessons.—Object ; to teach the *formation* and *expression* of ideas. Principles of this teaching derived from the study of perceptive powers.

COURSE OF LESSONS :

1. Naming objects (present and absent) for *clear ideas* of *single objects* and their names. Answers full, simple sentences and correct pronunciation ; Reading and writing as accompaniments.

2. Lessons on *single objects* for ideas of *single qualities* and their names ; express thoughts in speech and writing.

3. Lessons on *parts* of *single objects*. naming the parts for clear ideas of *parts* and their names ; second kind of lessons continued for *review* and for *new ideas* ; sight first appealed to, then call *touch*, *taste*, and *smell* into activity ; written exercises. special forms of expression.

4. Lessons on *single objects* for *distinct ideas* and their *expression ; All* the senses used *in order ; Elementary definitions*, *descriptions*, *reviews*, slate exercises, special forms of expression ; uses of objects.

5. Comparison of objects for *differences* and *resemblances ;* slate exercises, special forms of expression.

6. Lessons for teaching the *formation* and *expression* of ideas of,—Form, extent, number, color, weight and capacity, position and direction, minerals, plants and animals. The principles of this teaching ; the grades of lessons ; the ideas and vocabulary ; the special forms of expression ; the method ; the primary aim.

GRAMMAR—ORAL COURSE.

1. *Classification.*—Order in which parts of speech should be presented to pupils ; method of presenting each part of speech ; drill review, practical exercises.

2. *Sub-Classification.*—What sub-classes of each part of speech should be presented ; methods of presenting ; method of review and practical exercises ; independent parts of speech ; qualifiers ; connectives.

3. *Inflexions.*—Necessary inflexions of each part of speech defined, and methods of presenting discussed ; review and practical exercise.

4. Relation of words from a purely grammatical standpoint or based on analysis.

5. Further sub-classification and inflection ; subject discussed more minutely.

Text-Book Course.—Plan : arrangement of matter ; methods of presenting the various parts of this course ; oral course taken as basis.

ANALYSIS.

1. Subject and Predicate, Phrase and Clause.

2. Adjuncts of subject and predicate, object or complement, predicate nominative, predicate adjective, direct and indirect objects.

3. Different kinds of adjuncts, different kinds of subject, and of object, subordinate clauses.

4. Complex and compound sentences, contracted, collateral, elliptical sentences.

5. Synthesis, or building up of sentences.

Composition.—Arising out of Grammar Course ; lessons graded as in that Course, and of the nature of practical illustration on successive steps.

Text-Books.—Whitney's Grammar and Language Lessons.

Spelling.—General principles for teaching spelling orally and by writing from dictation, discussed and practically illustrated.

2.—Reading.

(20 *Lectures and Exercises.*)

Reading.—Alphabetic, word, object, phonic, phonetic and sentence, methods of presenting first Reading Lessons, discussed—relative value of each discussed—practical illustrations with general principles for guidance.

Advanced Reading.—Qualities of good reading, and how produced; cultivation of the voice, organs of speech; pitch; time; inflection; modulation, &c.; practical application of general principles.

Book of Reference for Pronunciation.—Ayres' Orthoëpist.

3.—writing.

(20 *Lessons.*)

Pen-holding movement, position, movements, exercises, principles, elements, form, size, slant, widths, heights, figures, letters, characters, lights, shades, spaces, measures and measurements, classification, grouping, analysis, tracing, counting, printing, dictation, line-drawing, blackboard writing, lesson outlines, repetition, intersection, succession, symmetry and harmony.

English, Irish, French, American and Canadian systems and methods of acquiring and teaching, contrasted and harmonized.

Exercises to develop the idea of correctness; and exercises to develop the *habit* of speed in writing.

4.—arithmetic.

(20 *Lectures.*)

Objects to be aimed at in teaching Arirhmetic. Inductive and deductive methods of teaching this subject. General principles to be observed. Common errors in teaching Arithmetic, and how to avoid them.

Simple Rules.—How to introduce the Simple Rules. Teaching of numbers, notation, addition table; addition, devices to insure accuracy and rapidity. Subtraction by decomposition and by equal additions. Multiplication and division generally.

Application of Simple Rules to Solution of Problems.

Canadian Currency.

Measures and Multiples.

Fractions.—Methods of introducing fractions and connecting them with previous rules. Methods of deducing the different rules in fractions. The meaning of multiplication of fractions, and its connection with ordinary multiplication.

Decimal Fractions.—Their nature and connection with our ordinary system of notation.

Reduction and Compound Rules.—Their place in Arithmetic discussed. When they should be introduced and to what extent.

Commercial Arithmetic.—Practice, commission, interest, discount, stocks, partnership, alligation, exchange, involution and evolution.

Mental Arithmetic.—Importance of its value. How to teach it.

Text-Books.—Kirkland and Scott's Arithmetic, Hamblin Smith's Arithmetic, McLellan's Mental Arithmetic.

5.—ALGEBRA.

(10 *Lectures.*)

History of the science. Arithmetical Algebra. Symbols of quantity, symbols of operation. Notation and first principles. Definition of signs. Extension of definitions. Laws of combination. Proofs of the rules for the signs in multiplication and division. Symmetry and its application. Examples in symmetry. Mathematical induction. Remainder after division. Factoring. Measures and multiples. Algebraic fractions; their difference from arithmetical fractions; proofs of the rules, application of the principles of symmetry and factors to the simplification of fractions. Ratio and proportion. Complete squares and cubes. Special methods of solving equations.

Text-Book.—McLellan's Algebra.

6.—EUCLID AND MENSURATION.

(10 *Lectures.*)

Euclid.—History of Euclid's Elements. Defects and merits of the work. Methods of teaching Geometry. Objects to be aimed at, and errors to be avoided. Criticisms of Euclid's definitions. Postulates and axioms. Demonstrations direct and indirect. Classification of propositions. Riders and problems. Geometrical analysis and its application to the solution of problems.

Mensuration.—Objects to be aimed at in teaching Mensuration. To find the area of rectangle and from it to deduce area of square, parallelogram, triangle, and circle. Examples and special methods of solutions. Solids; cube, prism, cylinder, pyramid, cone, and sphere.

7.—HISTORY AND GEOGRAPHY.

(10 *Lectures.*)

History.—The purpose of historical teaching. Text-Books and Methods of using them. Methods of teaching, chronological and topical. Selection of facts to be taught. Biography in History. Poetry in History. Hints on teaching; errors to be avoided. A first lesson in History.

Geography.—Objects to be aimed at. Mainly useful for information. Its disciplinal value. Right methods of teaching it and how to arrive at them. The Synthetic and Analytic methods discussed. Home Geography. Lessons on earth and water. Order of geographical facts. Use of globe and maps. Mathematical Geography. Physical Geography and its influence on national character. Illustrations of the effects of physical conditions on national history. Commercial Geography. Descriptive Geography.

8.—OBJECT LESSONS.

(5 *Lectures.*)

Subjects for Object Lessons. Definite aim—Unity. Hints on teaching: errors to be avoided. Development lessons on form, colour, qualities, etc. Information Lessons.

REGULATIONS.

GENERAL.

There shall be two sessions of the Provincial Normal Schools in each year :—The first, opening on the third Tuesday in January, and closing on the third Friday in June ; the second, opening on the third Tuesday in August, and closing not later than the twenty-second of December.

The hours of daily work shall be from 9 a.m. to 12, and from 1:30 p.m. to 4 p.m. The daily sessions shall be opened and closed as prescribed in the Regulations for Public Schools.

The students shall lodge and board in such houses only as are approved by the Principal ; and shall not be out of their boarding-houses after 10 p.m. Ladies and gentlemen shall not board at the same house. Communication of every kind between the sexes is strictly prohibited.

DUTIES OF THE PRINCIPAL.

The Principal shall be responsible for the discipline, classification and organization of the Normal School students ; he shall prescribe the duties of the Masters, subject to the approval of the Minister of Education ; he shall cause such examinations to be held from time to time as may be deemed necessary, and keep a record of the same ; he shall give such direction to the officers of the Normal School as will secure the efficiency of the service.

DUTIES OF THE MASTERS.

The Masters shall be responsible to the Principal for the order, discipline, and general progress of their classes; they shall report monthly to the Principal the standing of each student in the subjects of their departments, and daily, the absence of any student from their classes.

DUTIES OF STUDENTS.

Every student shall attend regularly and punctually all the classes during the term ; he shall conduct himself with becoming courtesy towards his teachers and fellow students ; he shall make reparation for all damage caused by him to furniture or other property belonging to the school, and he shall submit to such discipline as may be required by the Principal or Masters of the Normal School.

COURSE OF STUDY.

The course of study in the Normal Schools shall embrace the history, science and art of education, school organization and management, school hygiene, practical English and English literature, natural science, mathematics, drawing and writing, music, drill and calisthenics, as defined in the Syllabus of Lectures prescribed by the Education Department.

PRACTICAL TEACHING.

Every student shall be required to conduct classes in the Model School, and to teach such subjects as he may be directed under the supervision of the masters of the Normal, and teachers of the Model School.

EXAMINATIONS.

The closing examination shall be extended over the last two weeks of the Session and shall be conducted by the Principal of each school.

The Examiners to conduct the final examination in practical teaching and to prepare papers in the subjects in the syllabus of examination, shall be designated by the Chairman of the Central Committee.

In Drawing, Writing, Music, Calisthenics, Drill and Reading, the reports of the respective Masters shall be accepted as final, unless otherwise ordered.

The examination in practical teaching shall be conducted on the last three days but one of the Session.

Of the marks in practical teaching 400 shall be awarded by the Principal and 100 by the Examiners appointed by the Chairman of the Central Committee.

Unless otherwise ordered the answers of the students at the final examination shall be read by the Principals and such members of the Normal and Model School staffs as the Principal may call to his assistance; and the results shall be declared at the closing exercises. A minimum in each subject of 40 per cent. and 60 per cent. on the aggregate will be required for pass. The students' work during the whole session will also be considered.

SUBJECTS FOR FINAL EXAMINATION.

Subject.	Time.	Marks Allowed.
History of Education	1 hour.	100
Science of Education	"	150
Principles and Practice of Education	"	150
School Organization and School Management	"	150
English Literature	"	100
Practical English	"	100
Hygiene	"	100
Chemistry	"	100
Physics	"	100
Botany	"	100
Zoology	"	100
Drawing	"	100
Writing	"	100
Music	"	100
Calisthenics	"	100
Drill	"	100
Language Lessons, Grammar, etc	"	150
Reading	"	100
Arithmetic	"	150
Algebra	"	100
Practical Teaching in Normal and Model Schools	"	500

MODEL SCHOOL.

The Masters of the Model School shall act under the direction of the Principal of the Normal School, and shall be responsible to him for the order, discipline and progress of the pupils attending the Model School.

The terms of the Model Schools shall correspond to those in High Schools, and except to fill up vacancies, pupils shall be admitted only at the beginning of a term.

The Regulations respecting pupils in Public and High Schools shall apply to pupils of the Model School, subject to such variations as may be approved by the Minister of Education on the report of the Principal.

FINAL EXAMINATIONS.

The papers for the closing examinations of the Provincial Model Schools shall be prepared by a Committee consisting of the Masters of the Normal Schools. The Principals of the Normal Schools shall alternately act as Chairmen of such Committee, and direct the necessary correspondence. Each of the papers shall be approved by at least one master of each school, and all the papers shall be in the hands of the Secretary of the Department on or before the first day of April in each year. The printed papers shall be confined to the subjects of Arithmetic, Geography, Dictation, Grammar, Algebra, Physiology, Chemistry, History, Literature and Euclid, as taught in the Third, Fourth and Fifth Classes. A minimum of one-third in each subject and one-half of the aggregate marks obtainable, shall be required for promotion.